

## ABSTRAK

Avikasari. S031602004. 2018. Pengembangan Bahan Ajar IPA berbasis *Science Literacy* untuk Meningkatkan Prestasi Belajar Siswa Kelas IV Sekolah Dasar. Surakarta: Program Pendidikan Guru Sekolah Dasar, Program Pascasarjana, Universitas Sebelas Maret.

Penelitian ini bertujuan untuk: (1) mengetahui kebutuhan guru dan siswa terhadap bahan ajar IPA berbasis *science literacy* untuk meningkatkan prestasi belajar siswa kelas IV Sekolah Dasar; (2) mendeskripsikan pengembangan bahan ajar IPA berbasis *science literacy* untuk meningkatkan prestasi belajar siswa kelas IV Sekolah Dasar; (3) mengetahui keefektifan bahan ajar IPA berbasis *science literacy* untuk meningkatkan prestasi belajar siswa kelas IV Sekolah Dasar.

Penelitian ini merupakan penelitian pengembangan untuk mengembangkan produk bahan ajar IPA berbasis *science literacy*. Pendekatan penelitian yang digunakan adalah kualitatif dan kuantitatif. Data diperoleh melalui wawancara, observasi, data dokumen, dan tes. Sampel dalam penelitian ini dipilih dengan teknik *random sampling*. Data dalam penelitian ini di analisis menggunakan uji *t non-independent* pada tahap pengembangan dan uji *t independent* pada tahap pengujian.

Hasil penelitian ini adalah: (1) analisis kebutuhan pengembangan bahan ajar yang telah dilakukan dalam penelitian menunjukkan bahwa bahan ajar IPA berbasis *science literacy* dirasa sangat penting untuk dikembangkan menurut guru dan siswa kelas IV sekolah dasar, karena dari hasil wawancara yang telah dilakukan membuktikan bahwa bahan ajar yang digunakan belum mampu menyampaikan konsep IPA pada siswa dan belum bermuatan literasi sains; (2) pada uji terbatas memperoleh masukan dari guru dan siswa tentang produk. Uji *t non-independent* pada uji luas memperoleh signifikansi 0,000 ( $<0,05$ ) yang menunjukkan bahwa terdapat perbedaan antara nilai *pretest* dan *posttest* siswa sebelum dan setelah menggunakan bahan ajar IPA berbasis *science literacy*; (3) Produk bahan ajar IPA berbasis *science literacy* terbukti efektif dalam meningkatkan prestasi belajar IPA kelas IV sekolah dasar pada materi bagian tubuh hewan dan tumbuhan. Hal tersebut dibuktikan dengan hasil uji *t* pada kelompok eksperimen dan kontrol memperoleh nilai signifikansi sebesar 0,021 ( $<0,05$ ) sehingga  $H_0$  ditolak. Perolehan nilai signifikan tersebut menunjukkan bahwa terdapat perbedaan yang signifikan rata-rata prestasi belajar IPA materi bagian tubuh hewan dan tumbuhan pada siswa kelas IV antara kelas eksperimen dan kelas kontrol. Simpulan dalam penelitian ini adalah pengembangan bahan ajar IPA berbasis *science literacy* layak untuk digunakan dan efektif untuk meningkatkan prestasi belajar siswa kelas IV sekolah dasar pada materi bagian tubuh hewan dan tumbuhan.

**Kata Kunci:** *Science Literacy*; Prestasi Belajar; IPA; Bahan Ajar

## ABSTRACT

Avikasari. S031602004. 2018. The development of learning materials science is based on the Science Literacy to improve the achievement of Students in grade 4 elementary schools. Surakarta: Program of Education Elementary School teachers, Post Graduate Program, Sebelas Maret University.

This research aims to: (1) knows the needs of the teachers and students to the lesson materials science is based on the science literacy to improve the achievement of students in grade 4 elementary schools; (2) describes the development of learning materials science is based on the science literacy to improve the achievement of students in grade 4 elementary schools; (3) know the effectiveness of the lesson materials science is based on the science literacy to improve the achievement of students in grade 4 elementary schools.

This research is a development research to develop products teaching materials science is based on the science literacy. Research approaches that are qualitative and quantitative. Data obtained through interviews, document data, and tests. The sample in this study was chosen by random sampling technique. The data in this study were used using non-independent methods at the development stage and independent t test at the testing stage.

The results of this research are: (1) needs analysis the development of learning materials that have been done in research has shown that teaching materials science is based on the science literacy they thought it was very important to be developed according to the teachers and students in grade 4 elementary schools, because of the results of the interview that has been done to prove that the teaching materials used has not yet been able to convey the concept of science on the students and not negatively charged science literacy; (2) on the limited test feedback from teachers and students about the product. While the non-independent t tests on extensive tests to obtain the significance 0,0005 ( $<0.05$ ) which shows that there is a difference between the value of the pretest and posttest students before and after using the lesson materials science is based on the science literacy; (3) Products teaching materials science is based on the science literacy proved effective in improving the achievements of learning science grade 4 elementary schools on the matter of part of the body of the animals and plants. It is proved by the results of the t tests on the control and experiment groups obtain the value of the significance of 0,021 means less than  $\alpha = 0.05$  so  $H_0$  rejected. Acquisition value significantly shows that there is a significant difference between the average science achievement matter of part of the body of the animals and plants of the grade 4 students between classes of experiments and control classes. The conclusions of this research are the development of learning materials science is based on the science literacy worthy to be used and effective to improve the achievement of students in grade 4 elementary schools.

**Keywords:** Science Literacy, Science Achievement, Science, Material Teaching.